

VENKATA DEEPIKA POTU

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EDUCATION

Masters in Computer Science, University of Florida, Gainesville, GPA: 3.83/4.0 Aug 2024 - May 2026
Coursework: Software Engineering, Advanced Data Structures, Analysis of Algorithms, AI ethics.

Bachelors in Electrical Engineering, SASTRA University, India Jun 2018 - Jul 2022
Coursework: Object-Oriented Programming in C++, Machine Learning, Real time Operating Systems.

TECHNICAL SKILLS

Languages	Java, Python, C, C++, Rust, C#, JavaScript, TypeScript, HTML, CSS, JSON, XML.
Web Development	Spring Boot, jQuery, React.js, Angular, Node.js, Next.js, Vue.js, PHP, Flask, Django.
Database & Cloud	NoSQL, MySQL, PostgreSQL, Redis, AWS (EC2, S3, Lambda), Azure, GCP (CDN).
DevOps & Tools	Docker, Kubernetes, Jenkins, GitHub Actions, Terraform, Git, Bitbucket, Postman.
Concepts	Data Structures & Algorithms, cloud infrastructure, REST APIs, microservices.

WORK EXPERIENCE

Software Engineer Intern | *MetaZtech.ai* Jun 2025 - Aug 2025
• Accelerated image retrieval from about 15 minutes to **under 1 minute** by implementing a Node.js SFTP service.
• **Saved 8–12 minutes per asset** by developing a **React** and **Node.js** application that efficiently automated the initial 3D mesh generation process for artists from assets fetched via an SFTP service.
• **Optimized end-to-end processing time by 30–50%** by deploying a secure FastAPI image-to-3D microservice with Redis queue orchestration on Linux VMs, and added **Grafana dashboards for observability**.
• Secured the platform by provisioning and hardening **Linux VMs** and **GPU nodes**, implementing **VPN or WireGuard** for segmented access, centralizing secrets management, and enforcing role-based Git permissions.

Software Engineer | *Optum, India* Jul 2022 - Jul 2024
• **Reduced mean time to resolve (MTTR) claims-processing failures 60%** by launching a search-first full stack claims debug portal using **Spring Boot**, Angular, and SQL Server that surfaces stored procedure lineage.
• **Achieved 30% fewer post-release defects** by enforcing **TDD** with **Jasmine** and **JUnit** across services; broadened unit, integration, and API test coverage throughout frontend and backend codebases.
• **Boosted service uptime by 70%** by containerizing 15+ production microservices using Docker and Kubernetes and automating CI/CD with **Jenkins**; collaborated with SRE on rollouts and alerting.
• Transformed Excel data to JSON format for **API testing** using **Python**, **reducing 95% manual effort**.
• Increased customer support speed by **50%** by adding status flag to SQL procedures for targeted data retrieval.
• Collaborated with cross-functional teams using **Agile** methodologies, **reducing development cycles by 40%**.

PROJECTS

UFPA — *React.js, Redux, Go, MongoDB, JWT/OAuth, TLS, Cypress, Jest, Git, REST APIs*

- Led a team of 4 in full-stack web application development product for UF students using React, Go, and MongoDB, significantly improving help-request reliability and achieving **80% student satisfaction**.
- Reduced merge conflicts and coordination issues by documenting 10+ REST endpoints and standardizing **Git** branching and pull-request reviews; added Cypress and Jest tests for stability.

FareDrop Tracker — *Next.js, Node.js, AWS Lambda, DynamoDB, EventBridge, CDK, Cognito, Cloudfront*

- Developed a serverless flight price tracking platform using AWS Lambda, Node.js and Next.js that monitors fare fluctuations and alerts users when prices drop, **reducing manual tracking time by 90%**.
- Deployed infrastructure via AWS CDK and GitHub Actions, automating infrastructure management to cut setup time by 80% and enabling zero-downtime **CI/CD** with CloudWatch metrics and WAF-based security monitoring.

EmraldGPT — *Deep Learning, Machine Learning, Next.js, FastAPI, Python, LLMs, Transformers, LangChain*

- Improved answer accuracy by about 40% by prototyping a transformer-based Q&A system using LangChain and Hugging Face models with **semantic retrieval** and prompt tuning.
- Enabled real-time query handling by building a responsive **Next.js UI** integrated with 5+ FastAPI endpoints.

LEADERSHIP & ACTIVITIES

Teaching Assistant, Programming Fundamentals Aug 2025 - Present

- Led weekly labs for 20+ students, teaching Python fundamentals and providing support for lab completion.
- Guided 15+ students through project development, including feature scoping, troubleshooting, code review, and testing practices; rated **most approachable TA** by students.